Students prefer apps to the Web when using smartphones

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Students prefer using apps on their smartphones instead of being pointed to mobile app sites, according to a survey of Purdue University students. This runs counter to a move toward mobile Web development using HTML 5 by many Web developers.

The study results are being published Tuesday (Sept. 25) at the online academic site *Educause Center for Applied Research*. The study had 1,566 respondents and a margin of error of 3.3 percent.

At issue is whether when looking for information - such as wanting to check the weather forecast - students go to a weather app or simply use their phone's browser to connect with a weather website.

The survey results were clear: Students want the app. For almost every type of use surveyed, students prefer to use an app they have installed on their phones (the lone exception was for reference information). Using the weather example, students had a preference for the app by 85 percent versus 8 percent who wanted to use the Web.

The Purdue students said native apps are faster and simpler to navigate, perceptions that are also true, says Kyle Bowen director of Information Technology at Purdue's informatics group and one of the paper's co-authors.

"They are easier and faster to use, but native app programming is new and unfamiliar to most Web developers," Bowen says. "And trying to cut

corners in developing an app, such as by using a template tool, doesn't help you in the long run."

This isn't welcome news for [Web developers](#), who are part of a national trend toward favoring HTML-5 built [mobile](#) websites over apps.

For example, a 2011 article in The Chronicle of Higher Education was headlined, "[As mobile devices multiply, some colleges turn away from building campus apps](#)."

But it's not just universities that are learning this lesson. At the [TechCrunch](#) Disrupt conference in September, [Mark Zuckerberg](#) said Facebook's [biggest mistake](#) so far was betting on the HTML-5 [mobile Web](#) instead of focusing on native apps.

Purdue has developed seven mobile classroom apps designed to raise student performance through its Purdue Studio project. Bowen, who leads the project, says although he would prefer to develop mobile websites, the project team learned early on that students weren't comfortable with them.

"The first version of our Hotseat app had a mobile Web interface. There was no native app," Bowen says. "We discovered that students would go the app store and look for the Hotseat app, and when it wasn't there they wouldn't use the software on their phone."

Matthew Pistilli, a co-author on the paper and an academic technologies research scientist at Purdue, says this information into use preferences is important because there is little doubt that [mobile devices](#) are the future for higher education.

"The advantage of using mobile devices in higher education is that it allows the student to take the classroom almost anywhere," Pistilli says.

"For example, using an app such as Purdue's Jetpack or through mobile access to Blackboard, students can read articles, work on assignments or collaborate with others from anywhere."

Pistilli says there are hidden benefits, too, because instructors and administrators can learn more about which educational approaches are working through data produced by the apps.

"Analytics collected on application use allow an instructor or institution to do several things, such as fine tune the software, promote the use of other apps or simply provide information to students about how they can enhance their class performance," Pistilli says.

Among other findings from the survey:

- When asked how to rank their skill level on using the phone from novice (only using the phone for calls, email and texting) to expert (having developed mobile apps), 85 percent considered themselves either an intermediate (42 percent) or advanced (43 percent) user.
- Students rely on their devices: Users describing themselves as novice used their device an average of 2.1 hours per day, and expert users are on their device 5.3 hours per day.
- The most popular operating systems were Android, used by 43 percent of the students, and Apple's iOS, which was used by 40 percent. "There are a number of manufacturers building many different Android smartphones, so Apple's iPhone is the clear favorite device among our students," Bowen says.
- The least popular device was the RIM Blackberry, which was used by 9 percent of the respondents.
- Students are aware of data charges, and 33 percent say they would never download a video unless connected to a Wi-Fi

network.

More information: Student Preferences for Mobile App Usage, Kyle Bowen, Matthew D. Pistilli, Purdue University

ABSTRACT
In the debate over "native versus neutral" what do students prefer? Is a student's preference for a mobile learning application related to the nature of the information provided or the activity performed? This research bulletin examines a study conducted by Purdue University regarding student mobile preferences. This study provides insights into how students prefer to consume information on the mobile devices ranging broad categories to coursework-specific areas of interest. Additionally, a brief case study of Purdue's own mobile development activities illustrates one example for how this information can be practically applied. The information detailed in this research bulletin is intended to help inform future mobile application development efforts, as well as establish expectations for companies with which institutions do business.

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